Editorial: Welding: a bibliometric analysis

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Welding is defined as "a materials joining process in which two (or more) parts are coalesced at their contacting surfaces by the suitable application of heat and/or pressure." Welding is typically executed on parts made of same material, but some welding operations can be used to join different materials. Welding is the most important form of permanent joining of parts used industrially (Davim, 2021; Gupta and Davim, 2021).

The bibliometric analysis used the database Scopus/Elsevier to search for the documents. Using the term {welding}, TITLE-ABS-KEY ({welding}), 205,149 documents were identified (search carried out on 18th April 2025).

The results obtained in documents can be seen in Table 1, for the first ten positions concerning year, source, author, affiliation, country, document type, scientific area, and funding support. The better results obtained shown in the function of the number of documents produced: year 2024 (10,114), followed by the years 2019 (9,082) and 2020 (8,939); source *Hanjie Xuebao transactions* – The China Welding Institution (4,475) followed by *Welding International* – Taylor & Francis (3,332) and *Proceedings of SPIE* – The International Society for Optical Engineering (2,693); author H. Fujii – Joining and Welding Research Institute (451), followed by V. Balasubramanian – Annamalai University (385) and M. Tanaka – Joining and Welding Research Institute (333); affiliation Osaka University (4,409) followed by Harbin Institute of Technology (3,906) and Ministry of Education of China (3,260); country China (49,368) followed by USA (21,779) and Japan (16,563); document type article (141,762) followed by conference paper (52,148) and review (3,906); scientific area engineering (154,736) followed by materials science (99,783) and physics and astronomy (41,415) and funding support National Natural Science Foundation of China (13,562) followed by Ministry of Science and Technology of China (6,780) and National Key Research and Development Program of China (2,115).

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Table 1 Documents (205,149)

	Year	*Source*	*Author*	*Affiliation*
1	2024 (10,114)	*Hanjie Xuebao Transactions* (4,475)	H. Fujii (451)	Osaka University (4,409)
2	2019 (9,082)	*Welding International* (3,332)	V. Balasubramanian (385)	Harbin Institute of Technology (3,906)
3	2020 (8,939)	*Proceedings of SPIE* (2,693)	M. Tanaka (333)	Ministry of Education of China (3,260)
4	2023 (8,889)	*Welding Journal Miami* (2,656)	S. Katayama (314)	Shanghai Jiao Tong University (2,535)
5	2022 (8,706)	*Int. J. Adv. Manuf. Tech.* (2,648)	C. Wu (303)	Chinese Academy of Sciences (2,202)
6	2018 (8,425)	*Welding in the World* (2,505)	D. Fan (292)	Joining and Welding Research Institute (2,132)
7	2017 (7,557)	*Advanced Materials Research* (2,195)	U. Reisgen (287)	Tianjin University (1,983)
8	2014 (6,908)	*Journal of the Japan Welding Society* (2,184)	L. Wu (283)	Tsinghua University (1,607)
9	2016 (6,843)	*Journal of Materials Proc. Technology* (1,987)	J. Feng (270)	Huazhong University of Sc. and Technology (1,400)
10	2015 (6,625)	*Materials Science Forum* (1,987)	F. Matsuda (262)	Beijing University of Technology (1,373)
	Country	*Type*	*Area*	*Funding support*
1	China (49,368)	Article (141,762)	Engineering. (154,736)	National Natural Sci. Found. of China (13,562)
2	USA (21,779)	Conference paper (52,148)	Materials science (99,783)	Ministry of Science and Technology of China (6,780)
3	Japan (16,563)	Review (3,906)	Physics and astr. (414,15)	National Key Res. and Dev. Program of China (2,115)
4	India (14,496)	Book chapter (2,778)	Computer science (18,794)	Fundamental Res. Funds for Central Universities (1,730)
5	Germany (11,292)	Conference review (1,953)	Mathematics (10,308)	European Commission (1,393)
6	UK (7,262)	Note (802)	Energy (5,968)	China Postdoctoral Science Foundation (1,179)
7	Russian Fed. (6,980)	Short survey (480)	Chemical eng. (8,972)	National Science Foundation (1,135)
8	South Korea (5,265)	Book (323)	Chemistry (8,573)	Ministry of Education of China (1,096)
9	Canada (4,260)	Editorial (299)	Earth and planet. sciences (5,396)	D. Forschungsgemeinschaft (971)
10	Italy (4,020)	Letter (214)	Medicine (5,226)	Japan Society for the Promotion of Science (862)

Source: Scopus/Elsevier, 18th April 2025

References

Davim, J.P. (2021) *Welding Technology*, Springer [online] https://link.springer.com/book/10.1007/978-3-030-63986-0 (accessed 18th April 2025).

Gupta, K. and Davim, J.P. (2021) *Advanced in Welding and Deforming*, Elsevier [online] https://www.sciencedirect.com/book/9780128220498/advanced-welding-and-deforming (accessed 18th April 2025).